Synopsis of Original Research Paper

Development of nanocapsule-type functional cosmetics for targeting mitochondria

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Mitochondria, which have a variety of functions, are attracting the interest of scientists, since they are organelles that can contribute to the realization of innovative disease treatments, the maintenance of beauty and health, and development in the life sciences. To date, data related to commercially available cosmetic products that deliver functional molecules to mitochondria to exert cosmetic effects have not been reported. The aim of this study is to develop a nanocapsule-type functional cosmetic product that targets mitochondria. To accomplish this, we propose to use a nanocapsule (MITO-Porter) to deliver molecules to mitochondria in human skin cells. The proposal includes “Construction of drug-encapsulated nanocapsules”, “Verification of cellular uptake and mitochondrial delivery of the nanocapusule” and “ Functional evaluation of mitochondria”.